

Appln No. 09/944,905
Amdt date July 21, 2006
Reply to Office action of April 21, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A system for interacting with end user terminals over a first communications network, the system comprising:

a plurality of servers coupled to receive communication from the end user terminals over the first communications network;

an interface disposed between the plurality of servers and end user terminals, the interface being operative to receive requests from the end user terminals and to distribute the requests to the plurality of servers;

a second communication network coupled to provide communication between the servers in the plurality of servers;

a first computer program segment resident at [[each]] a first one of the plurality of servers, wherein said program:

receives a first request from an end user terminal,

processes the first request, and

broadcasts data regarding the ~~processed~~ first request to a second one of the plurality of the other servers,

a second computer program segment resident in ~~at least~~ the second one of the plurality of servers, wherein [[the]] said second program:

stores the data regarding the first request broadcast from the first at least one other server, of the plurality of servers in a local memory,

receives a second request from the end user terminal,

retrieves from the local memory the data regarding the first request for processing the second request; and

processes the second request based on the retrieved data,

wherein, ~~one of the~~ first and second ones of the plurality of servers respectively receiving ~~one of the~~ first and second requests ~~[[is]]~~ are selected based on a selection mechanism, the selection mechanism being configured to substantially evenly distribute request processing burdens amongst the plurality of servers.

2. (Original) The system of claim 1, wherein the first program segment broadcasts data over the second communication network to the second program segment.

3. (Original) The system of claim 2, wherein the second communications network comprises an Ethernet network.

4. (Original) The system of claim 3, wherein the second communications network comprises a gigabit Ethernet network.

5. (Original) The system of claim 1, wherein the end user terminals comprise ITV receivers, and wherein the requests from the end user terminals are requests from the ITV receivers to retrieve and transmit interactive content to the ITV receivers.

6. (Original) The system of claim 1, further including a database for permanent storage of the data relating to processed requests.

7. (Original) The system of claim 6, wherein the database is coupled to the second communications network.

8. (Original) The system of claim 1, wherein the interface disposed between the plurality of servers and end user terminals further includes means for routing incoming requests to the respective servers.

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9. (Original) The system of claim 8, wherein the means for routing comprises the Domain Name Server function of the Internet.

10. (Original) The system of claim 8, wherein the means for routing comprises a load balancing system (LBS).

11. (Original) The system of claim 2, further including a process coupled to the second communications network, wherein the process is programmed to monitor the network for instances of specific transactions.

12. (Original) The system of claim 11, wherein one of the process comprises a threshold monitoring process coupled to a content encoder, wherein the threshold monitoring process is programmed to process data transmitted over the second communications network, determine that a threshold has been exceeded, and to transmit a corresponding notification to the content encoder.

13. (Original) The system of claim 12, further including a frame relay line connected to the threshold monitoring process and the content encoder to transmit information there between.

14. (Original) The system of claim 11, wherein the process comprises a transaction processing process.

15. (Currently Amended) A method of interacting with user terminals over a communications network comprising:

receiving a first ~~and second~~ request[[s]] from a user terminal;

allocating the first request to a first server ~~and the second request to a second server, the first and second servers being~~ selected according to a selection mechanism, the

selection mechanism being configured to substantially evenly distribute request processing burdens amongst the plurality of servers;

processing the first request at the first server ~~and the second request at the second server;~~

transmitting ~~[[first]]~~ data relating to the first request to at least ~~[[the]]~~ a second server ~~and second data relating to the second request to at least the first server;~~ ~~[[and]]~~

storing the ~~first and second~~ data in ~~respectively~~ a local memory of the first and second server~~[[s.]]~~;

receiving a second request from the user terminal;

allocating the second request to a second server selected according to the selection mechanism;

retrieving by the second server from the local memory the data relating to the first request for processing the second request; and

processing the second request by the second server based on the retrieved data.

16. (Original) The method of claim 15, wherein transmitting data is performed over a private network.

17. (Original) The method of claim 15, wherein transmitting data is performed in a LBS.

18. (Original) The method of claim 17 wherein the LBS, which transmits data, distributes requests to the plurality of servers.

19. (Original) The method of claim 15, wherein allocating the request uses a round robin allocation to distribute the load over the plurality of servers.

20. (Original) The method of claim 15, wherein forwarding the request further comprises performing a load analysis to distribute the incoming requests over the plurality of servers.

21. (Original) The method of claim 15, wherein processing the request comprises retrieving and transmitting interactive content to an interactive television receiver.

22. (Original) The method of claim 15, further comprising monitoring the data relating to the request at each server.

23. (Original) The method of claim 22, further comprising:
detecting a threshold from the monitored data;
providing an indication of detection of the threshold to a content encoder;
encoding the indication of detection of the threshold; and
providing the encoded indication of reaching the threshold to at least one ITV receiver.

24. (Original) The method of claim 23 wherein detecting a data threshold comprises detecting a certain number of users.

25. (Original) The method of claim 24 wherein encoding the indication of detecting the threshold comprises placing an indication of detecting the threshold within a video signal to be provided to an ITV receiver.

26. (Currently Amended) A system for interacting with end user terminals over a communications network, the system comprising:

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plural servers adapted for communication with the respective terminals over the communications network, wherein the servers are connected for communication with the other respective servers;

an interface connected to the respective servers and operative to receive requests from the user terminals and to route the requests to the respective servers; and

wherein a first ~~[[each]]~~ of the plural servers is programmed to receive a first request from a particular end user terminal ~~one of the users~~, process the first request, and broadcast data regarding the ~~processed~~ first request to a second one of the plural ~~the other~~ servers, and wherein the second one of the plural servers ~~are each~~ is programmed to store the broadcast data in respective a local memories memory, receive a second request from the end user terminal, retrieve from the local memory the data regarding the first request for processing the second request, and process the second request based on the retrieved data, and wherein ~~one of the~~ first and second ones of the plurality of servers respectively receiving ~~one of the~~ first and second requests ~~[[is]]~~ are selected based on a selection mechanism, the selection mechanism being configured to substantially evenly distribute request processing burdens amongst the plurality of servers.

27. (Original) The system of claim 26, further including a back-end network connected to each of the servers, and wherein the servers are programmed to broadcast the data over the back-end network.

28. (Original) The system of claim 27, wherein the terminals comprise ITV receivers, and wherein the servers are responsive to requests from the ITV receivers to retrieve and transmit interactive content to the terminals.

29. (Original) The system of claim 26, further including a database for storage of the data relating to processed requests.

30. (Original) The system of claim 26, further including a plurality of processes connected to the back-end network, wherein each process is programmed to monitor the network for certain data and to process the appropriate data.

31. (Original) The system of claim 31, wherein one of the processes comprises a threshold monitoring process connected to a content encoder, wherein the threshold monitoring process is programmed to process data transmitted over the back-end network, determine that a threshold has been exceeded, and to transmit corresponding data to the content encoder.

32-35. (Canceled)

36. (Currently Amended) The ~~method~~ system of claim 1, wherein the selection mechanism randomly selects the one of the plurality of servers.

37. (Currently Amended) The ~~method~~ system of claim 1, wherein the selection mechanism is a round robin selection mechanism.

38. (Currently Amended) The ~~method~~ system of claim 1, wherein each server maintains all data needed for handling a request.

39. (New) The system of claim 1, wherein the data regarding the first request is registration data for a user of the end user terminal.

40. (New) The system of claim 1, wherein the data regarding the first request is transaction data transmitted by a user of the end user terminal.

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41. (New) The system of claim 1, wherein the first of the plural servers is programmed to concurrently broadcast the data regarding the first request to a plurality of the plural servers.